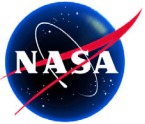


AIST Technology Roadmaps —

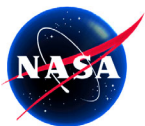
Strategic Planning Process and Investment Themes

*Karen Moe
ESTO TST
May 8, 2001*

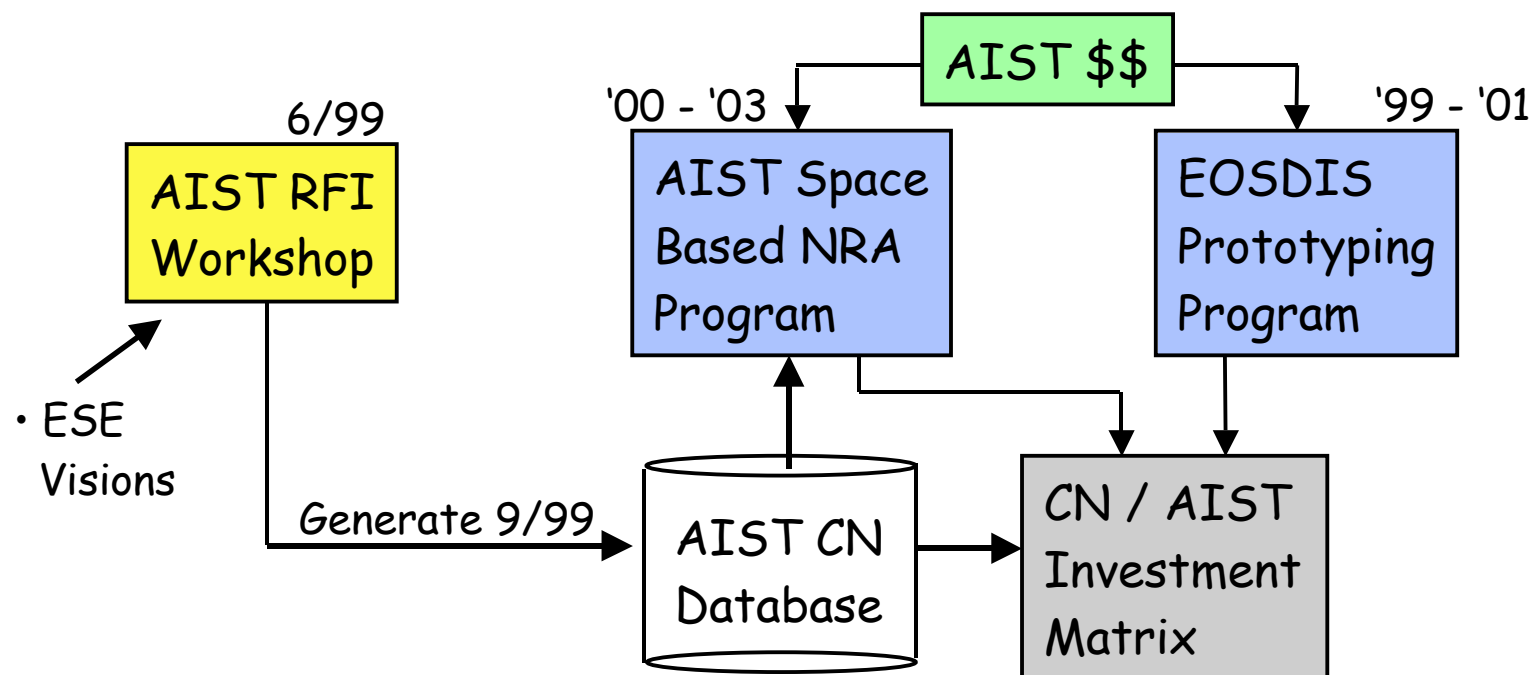


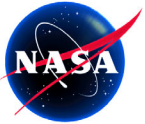
AIST Highlights

- AIST Request for Information and Workshop — June 1999
 - Produced a broad sweep of relevant information technologies for ESE
 - Results organized into AIST Capability/Need database; RFI report, CN dbms available via ESTO web site
- AIST Space-based Technologies NRA Selections — April 2000
 - By Dec. 2000, all awards in progress; Abstracts, progress reports available
- AIST Technology Projections Workshop — August 2000
 - Results fed key investment themes; Workshop proceedings available
- AIST Key Ground and Space-based Investment Themes
 - Mapped investment themes to CN dbms to weight technology needs
 - Mapped baseline measurement profile series ("Easton Report" BMPS) to CN dbms to weight technology needs
 - Mapped NRA and Prototyping investments to the CN dbms to identify initial technology investment gaps



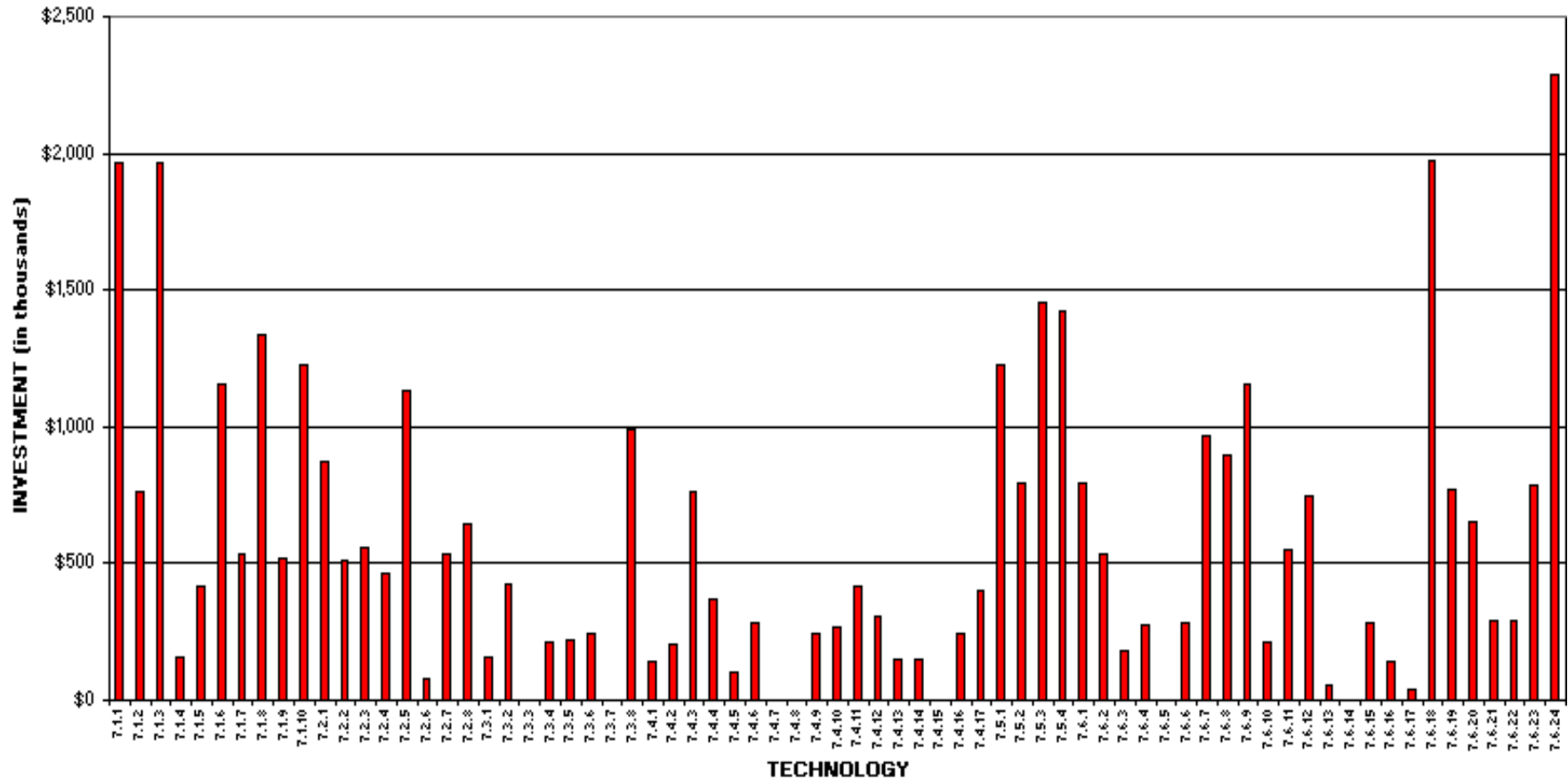
AIST Strategic Planning Process - 1st Cycle

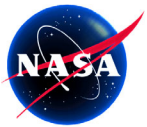




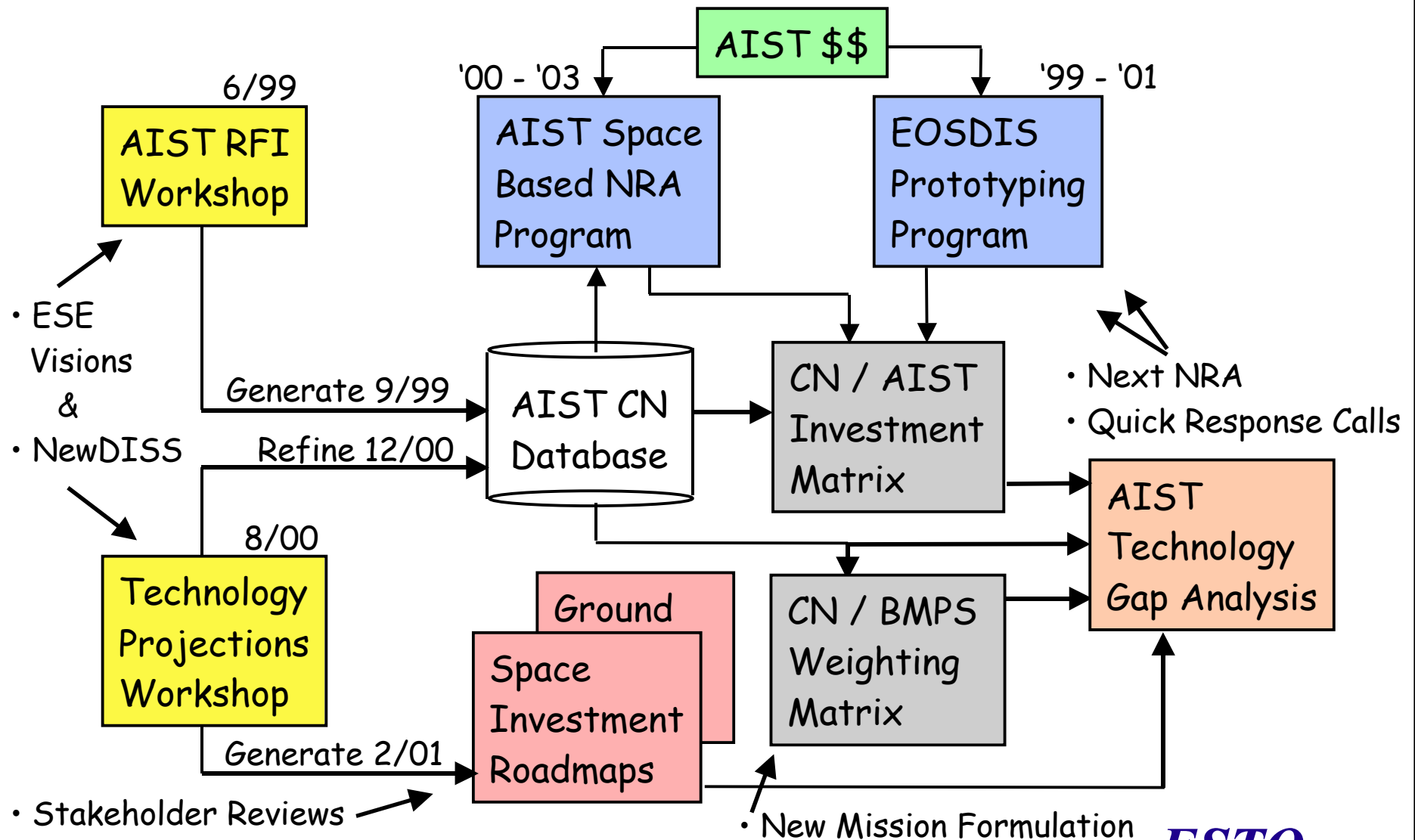
AIST Investment Matrix

AIST TECHNOLOGY INVESTMENT MAP





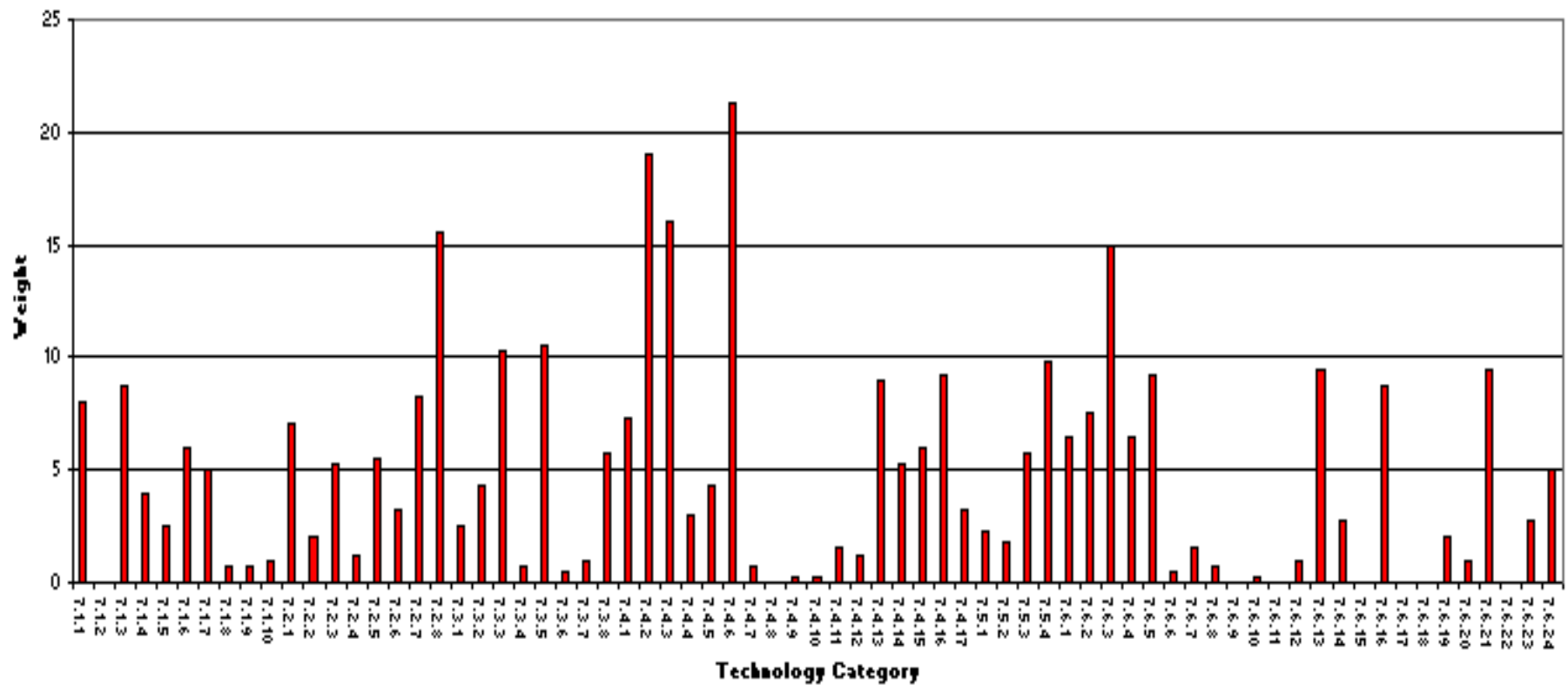
AIST Strategic Planning Process - 2nd Cycle





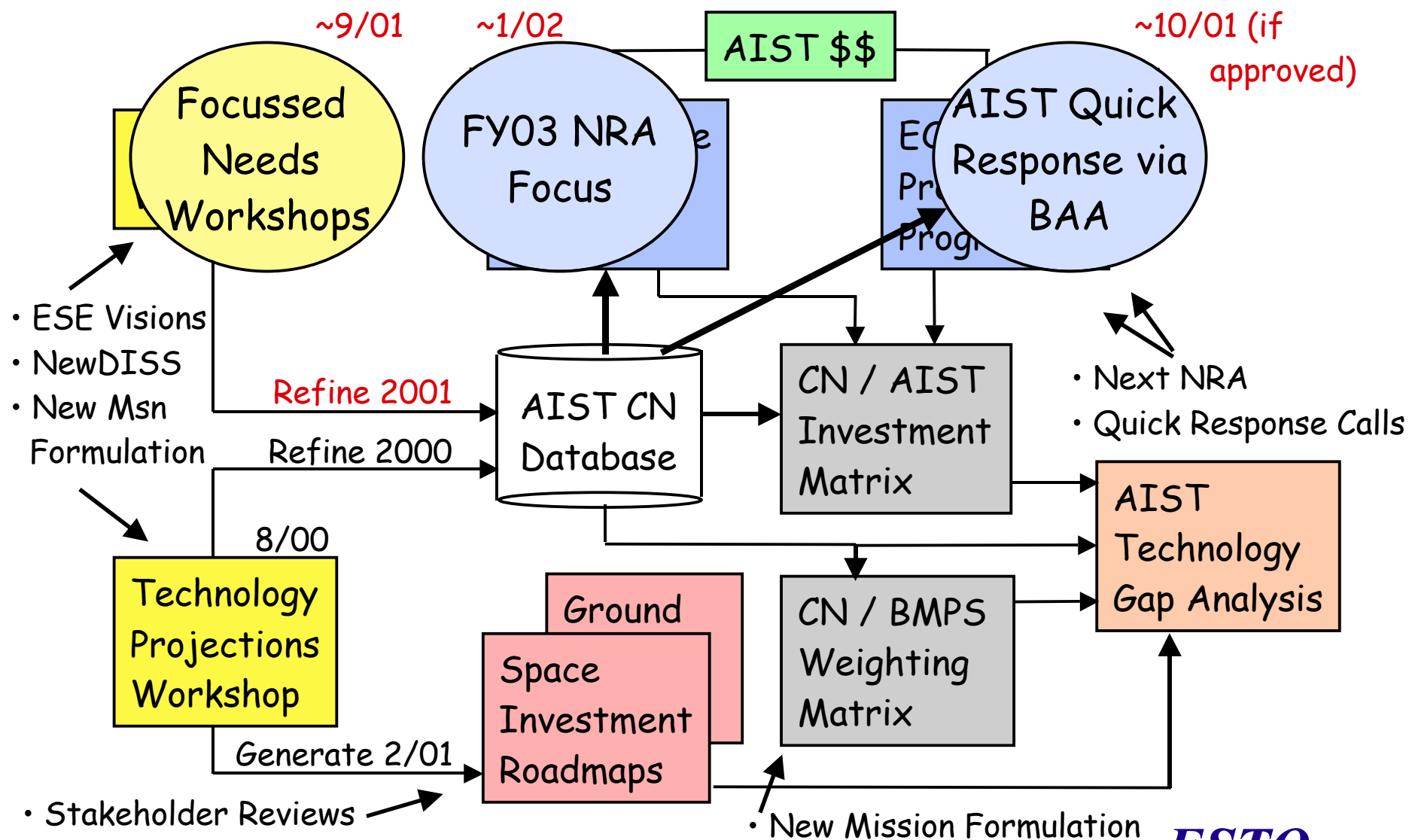
AIST CN / BMPS Matrix

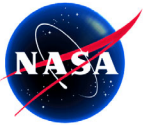
BMPS Missions Technology Map





AIST Strategic Planning Process - 3rd Cycle





AIST Road Map Activities

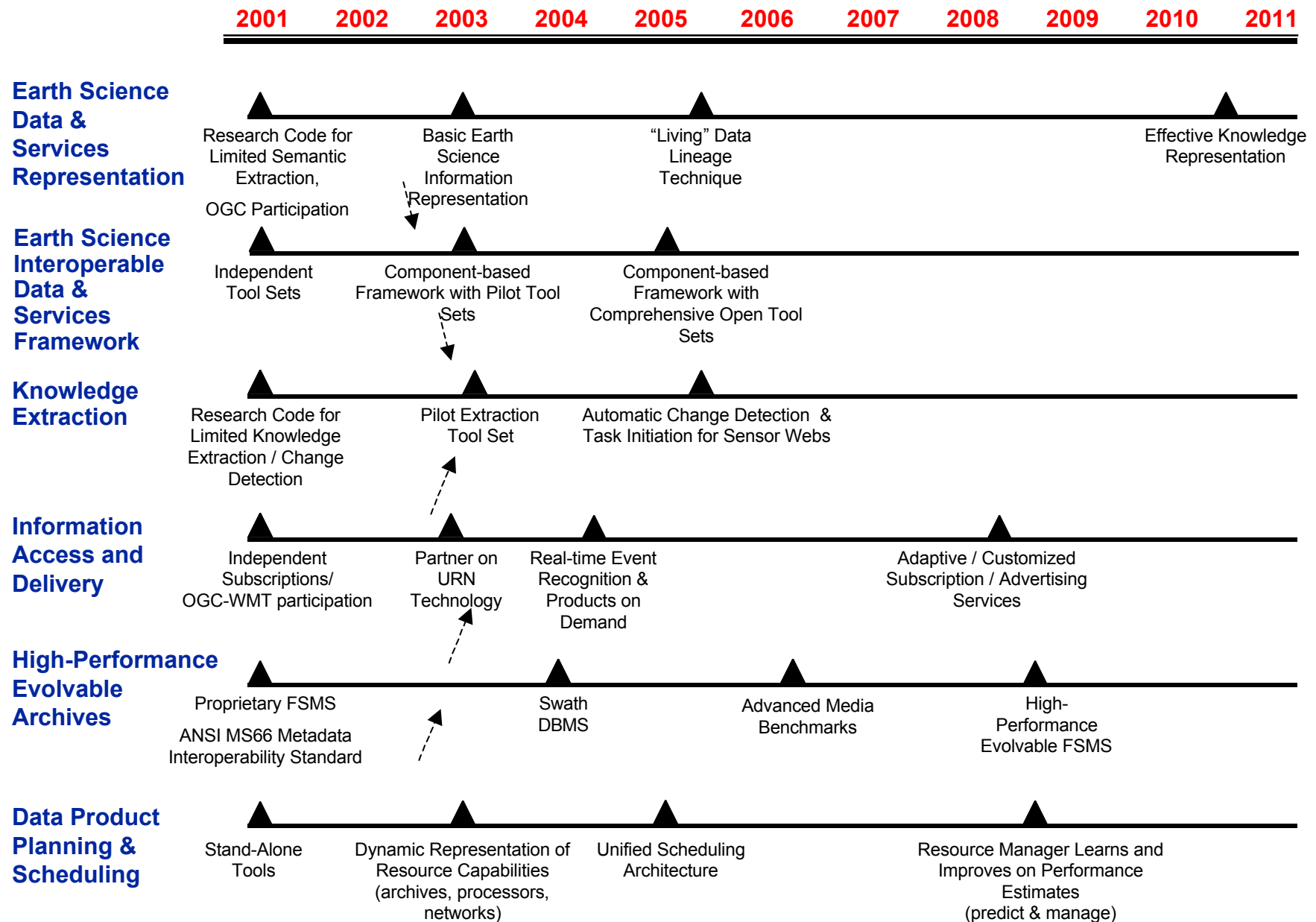
- AIST Technology Projections Workshop held August 2000
 - Purpose was to identify relevant IT technologies that are the most important for ESE to fund
 - Workshop structured to develop informed projections for 8 critical technology areas:
 - Large Archival Storage
 - Data Discovery
 - Data Exploitation
 - Data Architectures
 - Space Based Computing Architecture
 - Data Compression and Storage
 - Intelligent Platform and Sensor Control
 - High Speed Data Delivery

Ground-based Technologies

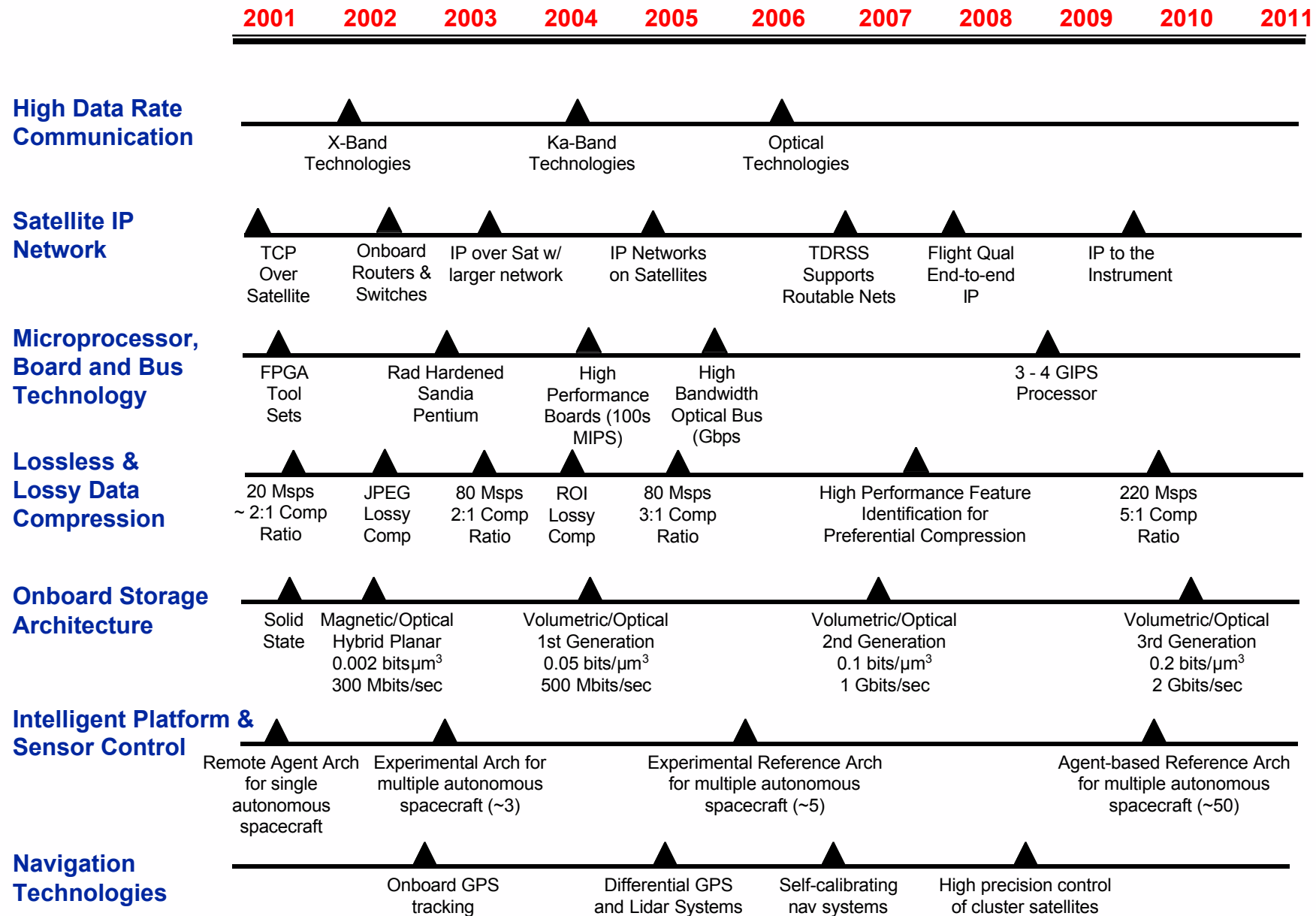
Space-based Technologies

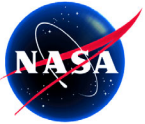
- Technical and ESE program specialists brought together to assess scope of projections, and technology "need" summary (some performance, cost and schedule data collected)

AIST Key "Ground" Investment Themes (v. 4/01)



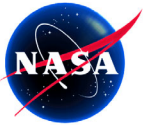
AIST Key "Space" Investment Themes (v. 4/01)





Status

- AIST technology investment activities have resulted in the following products (available at <http://esto.gsfc.nasa.gov>):
 - RFI technology survey report (1999)
 - AIST technology projections workshop report and charts (2000)
 - AIST NRA and Prototyping technical progress reports
 - Capability / Needs database (1999 & 2000 refinement)
 - CN weighting and investment matrices (2001)
 - First draft AIST themes for technology investments (2001)
- AIST activities currently in process
 - Technology Gap Analysis
 - Recommendation for BAA procurement strategy to complement NRA



Next Steps

- Continue analysis of sister technology programs for ESE related IT than we can leverage
 - Cross Enterprise Technology Development Program (CETDP)
 - Intelligent Systems (IS)
 - HPCC Earth and Space Science (ESS) Round 3
 - SBIR/STTR, Space Operations Management Office (SOMO) Technology Program, etc.,
- Identify / prioritize current technology gaps
- Review AIST investment themes with stakeholders
- Review strategy and procurement approach with stakeholders
- Get HQ endorsement of strategy and procurement approach to initiate BAA for quick response procurements
- Prepare for FY03 NRA solicitation